

Analysis of Published works in Sangeet Galaxy e-Journal during 2012-2022: A Statistical Study	
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Abstract

The present study considers 215 research works of different authors published in the Journal “Sangeet Galaxy”: a refereed journal dedicated to Indian music. All articles published during the period 2012-2022 have been considered for this study. The present paper examines the trend in authorship, percentage of collaborative research, citations, page length of the articles, the language of the articles, gender of the authors, designation and affiliation of the authors along with the state which they belong to. It has been statistically tested if the articles published are distributed uniformly over the period of study. Some interesting observations have come out from the study. For example, an increasing trend in the submission and publication of the articles over the years has been observed which indicates that the journal is becoming popular and is doing good in maintaining its academic standard. It has been observed that the trend in writing the articles in English is dominant. Mean percentage of collaborative research is 50% or less and the proportion of rejection is 0.50. Most of the contributors are from the state of Uttar Pradesh specially BHU, Varanasi. It is also noteworthy that the authors from countries like Nepal, Canada, UK etc. are also interested to contribute to the journal and consider “Sangeet Galaxy” as a suitable outlet for publishing their research work.

Keywords: Authorship, bibliometric study, citation, collaborative research, trend analysis.

Introduction:

Sangeet Galaxy is the first refereed e-journal in the field of music published from India. It is a UGC-approved journal and enlisted in the EBSCO database. Its first volume was published in 2012 which contained only six articles and now the current Volume 11 (2022) has been published with

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52 articles. This journal publishes two issues of a volume in a year (half-yearly). The journal covers various fields of music such as North Indian Classical Music, South Indian Classical Music, Folk Music, etc. Under this journal original research papers, articles, interviews, book reviews, and short communications from different fields of music in English and Hindi are accepted. Nowadays, bibliometric studies are playing an important role in research evaluation. The term "Bibliometrics" came into existence in 1969, and Alan Pritchard first used it in his paper (Pritchard, 1969). The bibliometric study has been applied to evaluate the individual's performance as well as the standard of the journal. The University Grants Commission (UGC) is playing an essential role in maintaining the quality of education and research in India. The quality of any research work can be assessed by citations of the research work. Previous bibliometric studies of the journal Sangeet Galaxy have examined articles only for a limited time period. Thus, the present work covers a study considering a larger period than the time period covered earlier.

Objective:

The present work is aimed at the exploration of the following objectives:

- i. To study the current trend of publishing articles in the journal "Sangeet Galaxy" in India during 2012 to 2022.
- ii. To study these patterns by means of number of articles, number of authors, state, article length and language in the field of music.
- iii. To identify the annual development of citations and contributions, the most frequent authors, the collaborative research in the journal "Sangeet Galaxy".

Methodology:

A total of 215 (nos.) articles have been published during the year 2012 to 2022 in different issues and volumes of Sangeet Galaxy. Several indicators are used to examine the research quality and development of the Sangeet Galaxy during this period. These indicators are viz., percentage or extent of collaborative research, authorship pattern, most frequent author etc. Further, the study only considers articles published during 2012-2022. All the articles have been downloaded and complete bibliographic details such as author, year, title, journal information etc. have been compiled for further analysis.

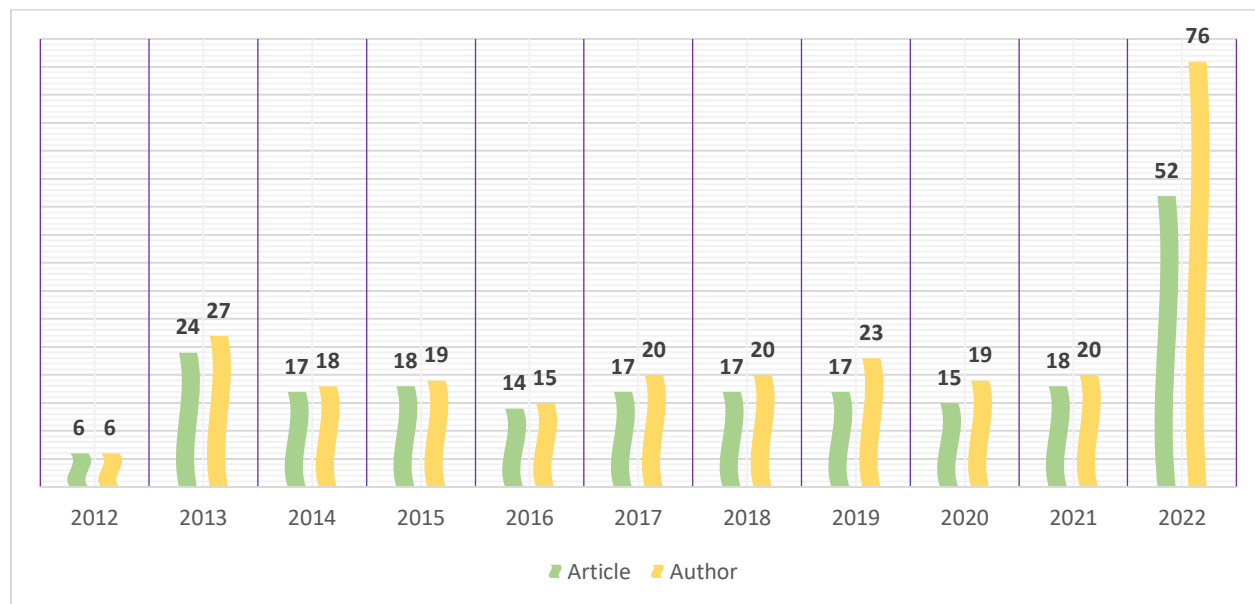
(a) Trends in publication of Articles and the number of Authors:

Table 1: Chronological pattern in the number of articles and number of authors

Year	Number of Articles	Percentage relative frequency of articles	Number of Authors	Percentage relative frequency of authors
2012	6	2.8	6	2.3
2013	24	11.2	27	10.3
2014	17	7.9	18	6.8
2015	18	8.4	19	7.2
2016	14	6.5	15	5.7
2017	17	7.9	20	7.6

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2018	17	7.9	20	7.6
2019	17	7.9	23	8.7
2020	15	7.0	19	7.2
2021	18	8.4	20	7.6
2022	52	24.2	76	28.9
Grand Total	215	100	263	100

**Figure 1:** Trends of number of articles and author's contribution

Trends in the number of articles and authors of Sangeet Galaxy during the year 2012 to 2022 have been given in Table 1. The maximum number of authors and articles have been received and published in 2022 including both issues. An upward trend in the number of submitted articles as well as the number of authors has been submitted observed (Figure 1). Further, the majority of articles 52(24.2 %) were contributed in the year 2022 out of 215 articles published to till date with the maximum number of authors 76 (28.52 %).

Firstly, it will be good to examine if the articles published are uniformly distributed over the years. Towards that objective a Chi-square goodness of fit test has been performed which is given below:

Here the following hypotheses are set

Null Hypothesis

H_0 : Articles published are uniformly distributed over the years 2012-22

Alternative Hypothesis

H_1 : Articles published are not uniformly distributed over the years 2012-22

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Table 2: Table showing calculation for frequency Chi-square statistic

Publication Year	No of Articles (f_{oi})	Expected observations (f_{ei})	$f_{oi} - f_{ei}$	$\frac{(f_{oi} - f_{ei})^2}{f_{ei}}$
2012	6	20	-14	9.39
2013	24	20	4	1.02
2014	17	20	-3	0.33
2015	18	20	-2	0.12
2016	14	20	-6	1.57
2017	17	20	-3	0.33
2018	17	20	-3	0.33
2019	17	20	-3	0.33
2020	15	20	-5	1.06
2021	18	20	-2	0.12
2022	52	20	32	53.89
Grand Total	215			68.49

Test statistics is $\chi^2 = \sum_i \frac{(f_{oi} - f_{ei})^2}{f_{ei}}$; where f_{oi} is the observed count for the i^{th} year

and f_{ei} is the expected count for the i^{th} year

Since the observed Chi-square value 68.49 is greater than the table value of chi-square 18.31 at 5% level of significance with 10 degrees of freedom, it can be said that the articles published are not uniformly distributed over the years under the study.

(b) Trend analysis of authorship and extent of collaborative research:

Table 3: Trend analysis of authorship and extent of collaborative research

Year (1)	Single author (2)	Double authors (3)	More than two authors (4)	Published Articles (2)+(3)+(4) (5)	Multi author (3)+(4) (6)	Extent of collaborative research $\frac{(6)}{(5)} \times 100$ (7)	Number of Rejected articles (8)	Received Articles (5)+(8) (9)	Rejection Percentage $\frac{(9)}{(8)} \times 100$ (10)
2012	6			6		0.00	0	6	0.00
2013	22	1	1	24	2	8.33	5	29	17.24
2014	16	1		17	1	5.88	5	22	22.73
2015	17	1		18	1	5.56	7	25	28.00
2016	13	1		14	1	7.14	7	21	33.33
2017	16		1	17	1	5.88	9	26	34.62
2018	14	3		17	3	17.65	9	26	34.62

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2019	15	1	1	17	2	11.76	8	25	32.00
2020	11	4		15	4	26.67	13	28	46.43
2021	16	2		18	2	11.11	16	34	47.06
2022	34	14	4	52	18	34.62	45	97	46.39
Article	180	28	7	215	35	16.28	124	339	
% of Article	83.72	13.02	3.26	100.00					

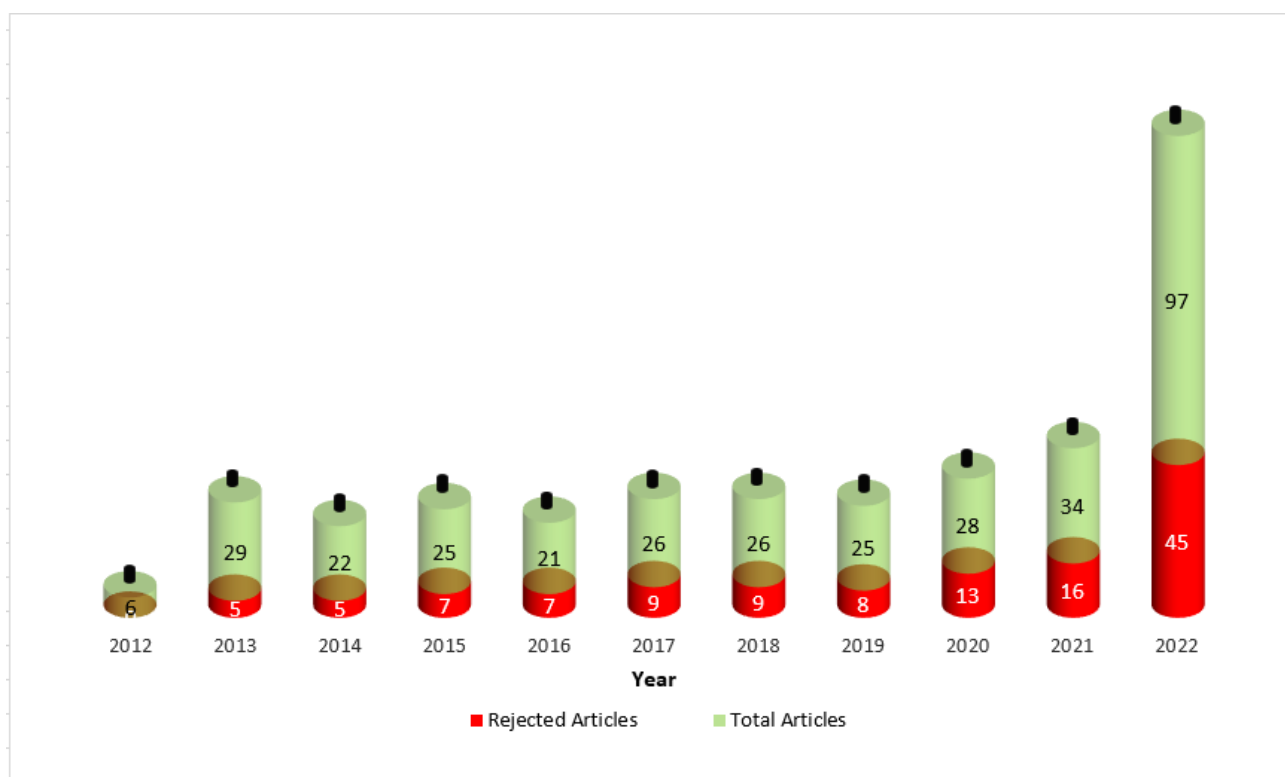


Figure 2: Rejected and total number of received articles

The authorship trend and the extent of collaborative research have also been studied and given in Table 3. The authors were classified into groups viz., single, double and more than two authors. It was observed that out of 215 publications, majority of the articles (83.72%) were published by single authors followed by double authors 13.02% . Further, it can also be noted that only 3.26% articles are there with more than two authors. Table 2 also shows the ratio of the number of articles with multiple authors to the total number of articles during the period of study.

The percentage of collaborative research is measured by PCR

$$\text{PCR} = \left[\frac{\text{number of articles with multi authors in the year}}{\text{total number of articles in the year}} \right] \times 100$$

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The overall percentage of collaborative research (PCR) for the period of eleven years is 16.28%. It was maximum for the year 2022 i.e., 34.62% and minimum for the year 2014 i.e., 5.88%. It is also observed that the percentage of collaborative research has increased gradually from 2012 to 2022. It means authors are showing interest in publishing their collaborative research work in the field of music in this journal.

Now it has been tested if the mean percentage of collaborative research is significantly different from 0.50

We set the hypotheses

Null Hypothesis

H_0 : The mean percentage of collaborative research for this journal is 50%

Alternative Hypothesis

H_1 : The mean percentage of collaborative research for this journal is greater than 50%

We didn't consider the data of 2012 as it was the starting year of the journal and 2022 as this year shows the maximum percentage of collaborative research

Here student's 't' test has been used where the observations for the years 2013-2021 are used as sample observations

Calculation yields the following: sample mean = 11.22, sample standard deviation = 7.02,

sample size = 9, value of the population means under H_0 = 50%

Test Statistic $t = \frac{|\bar{x} - \mu|}{s/\sqrt{n}} = -16.62$; with (9-1) degrees of freedom

Since calculated value of $t = -16.62$ is less than $t_{\alpha; n-1} = 2.30$, hence Null hypothesis H_0 is accepted. It means the mean percentage of collaborative research is 50% or less for this journal

Next, by applying suitable statistical test we look into the extent of rejection if the rejection percentage is significantly different from 50%.

We set the hypotheses

Null Hypothesis

H_0 : The percentage of rejection of articles for this journal is 50%

Alternative Hypothesis

H_1 : The percentage of rejection of articles for this journal is greater than 50%

Here under H_0 the proportion of rejection, $p = 0.50$, sample size (n) = 393,

Let X be the total number of rejected articles, here the observed value X is 124. Under

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$H_0, X \sim B(n = 393, p = 0.50)$

Here $p_{\text{observed}} = X/n = 124/393 = 0.366$

Test Statistic $Z = \frac{p_{\text{observed}} - p_0}{\sqrt{\frac{p_0(1-p_0)}{n}}} = -4.94$

Since calculated value of $Z = -4.94$ is less than $Z_{\alpha;0.05} = 1.645$, hence Null hypothesis H_0 is accepted. It means the percentage of rejection of articles is not more than 50%.

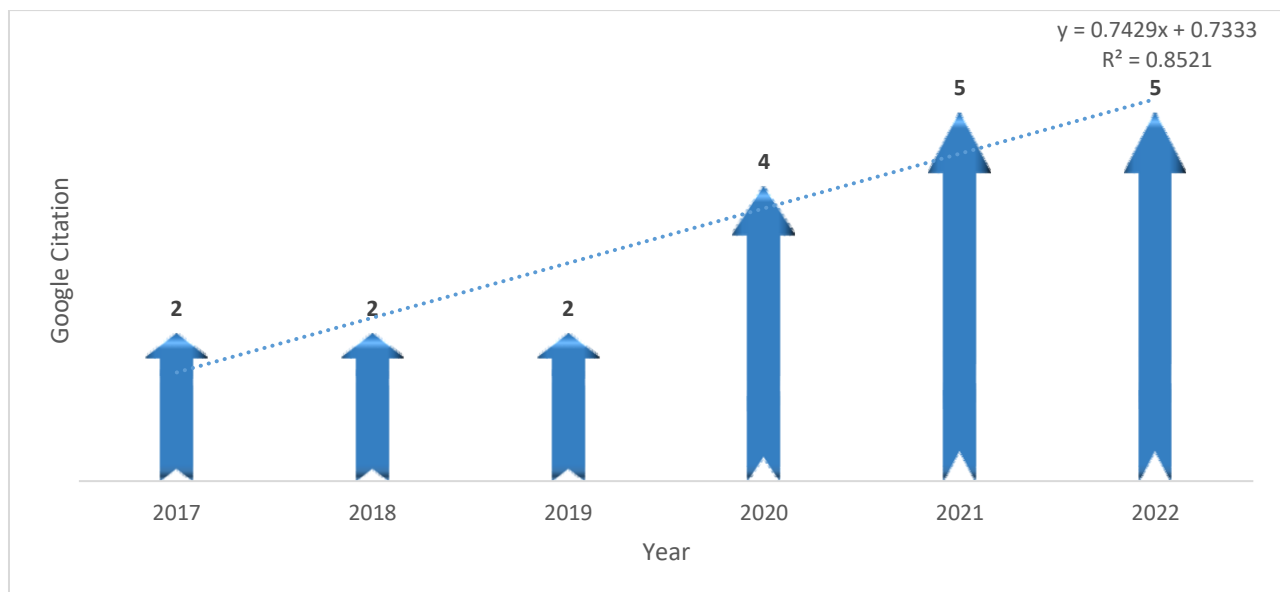
(c) Trend Analysis for Google Citation:

Figure 3: Google citation from 2017 to 2022 for the published articles in the journal.

Trend in Google citation of the published articles have also been obtained (Figure 3). There is an increasing trend in the number of Google citations of the articles published during the period of 6 years starting from 2017 to 2022.

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Table 4: List of authors with Google citations

Google citation	Title	Authors	Designation	Language	Institute	State
8	Indian Classical Music in a Globalized World	Samidha Vedabala	Assistant Professor	English	Sikkim Central university, Sikkim	Sikkim
3	Music Therapy for Meeting the Cure of Various Physical and Mental Disorders	Avesh Kumar	Research Scholar	English		Uttar Pradesh
2	Ubiquity of Music and its prevalence – some approaches	Parsuram Prasad Poudel	Associate Professor	English	Tribhuvan University, Nepal	Nepal
2	An Experiment on the Moods and Temporary Dispositions of Tribal School Girls in Tripura	Joyanta Sarkar	Assistant Professor	English	Rabindra Bharati University, Kolkata, West Bengal	West Bengal
1	Relation between Music and Mental Health: A Conceptual Review	Tanuka Chakraborty	Research Scholar	English	University of Calcutta	West Bengal
1	Musical Instruments used with Bhand Pather of Kashmir	Waseem Ahmad Bhat	Research Scholar	English	University of Delhi, New Delhi	Delhi
1	A Comparative Study between Indian Rāgas and Japanese Scales	Aishik Bandyopadhyay	Research Scholar	English	Rabindra Bharati University, Kolkata, West Bengal	West Bengal
1	History and Development of Harmonium in India and its Place in Gurbani Kirtan	Narendra Kaur	Assistant Professor	English	RRMK Arya Mahila Mahavidyala, Pathankot Punjab	Punjab
1	Origin and Development of Indian Music in the Early Periods: A Birds Eye View	Sheetal More	Associate Professor	English	SNDT Women's University Pune	Maharashtra

Google citations of the authors have also been retrieved (Table 4). The author Samidha Vedabala has the maximum number of Google citations (8), followed by Avesh Kumar (3), Parsuram Prasad Poudel (2), Joyanta Sarkar (2) and other authors each with 1 citation. It can also be seen that all the articles are in English language and from different states of India.

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Figure 4 indicates the details of the page length of the article. The figure shows clearly that the starting of the journal, maximum authors were contributing their short articles within 1-5 pages but in later period, considering its academic standard, the authors are now submitting their full-length articles of 10-15 pages.

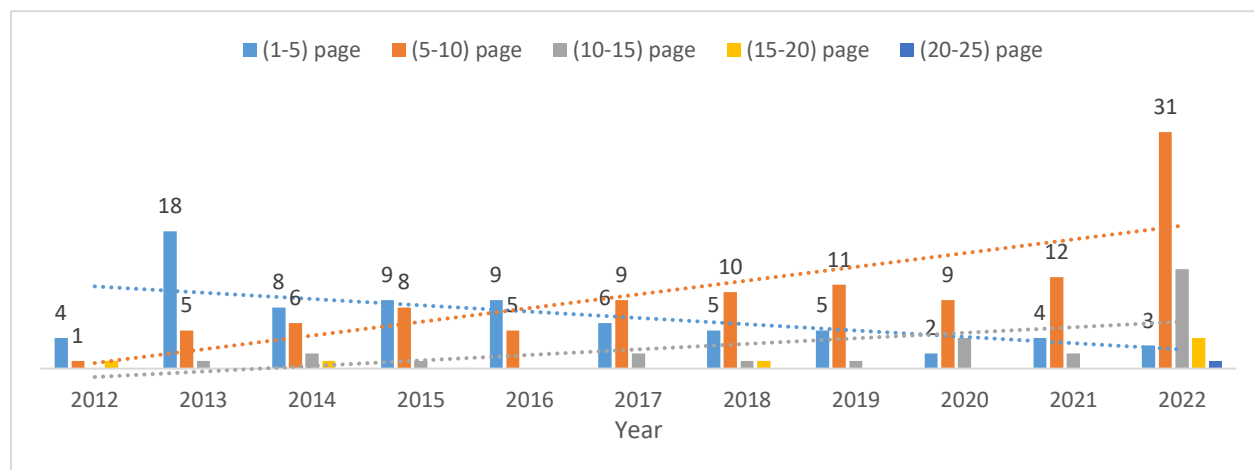


Figure 4: Pattern of number of pages in the articles during 11 years

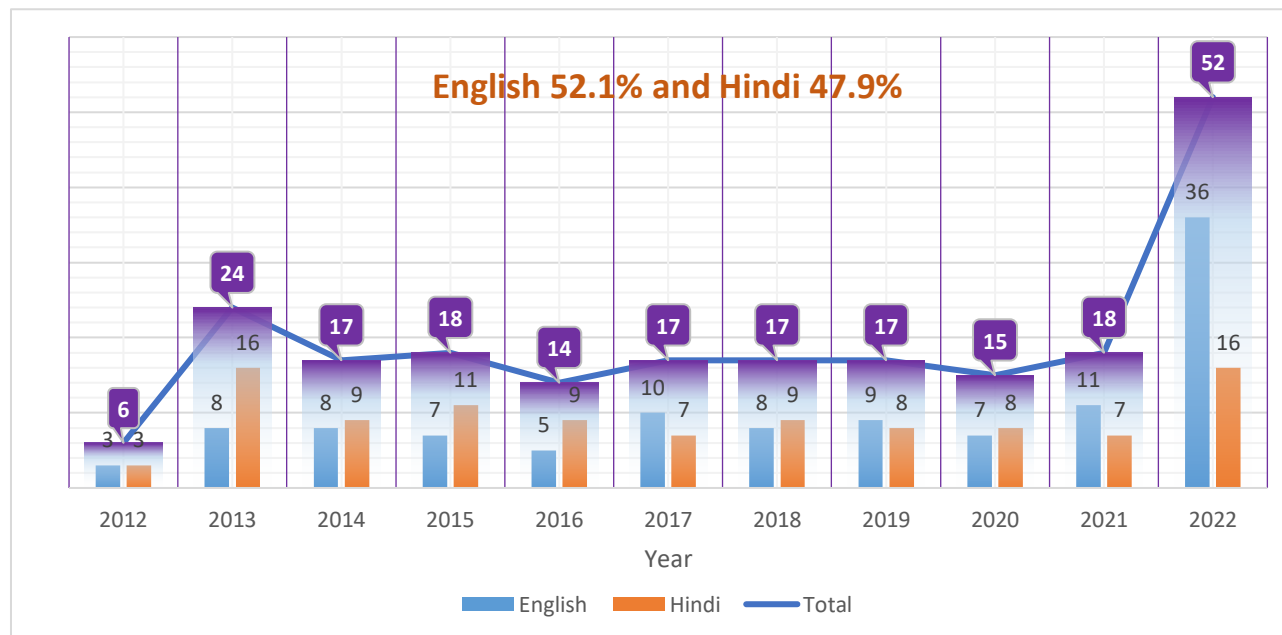
(e) Trend in choosing the Language of the Article (English / Hindi)

Figure 5: Contribution based on language (English / Hindi)

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Out of 215 published articles, 112 (52.1%) articles are in English whereas 103 (47.9 %) articles are in Hindi. It is clear that there is more contribution from the English authors than Hindi authors. (Figure 5).

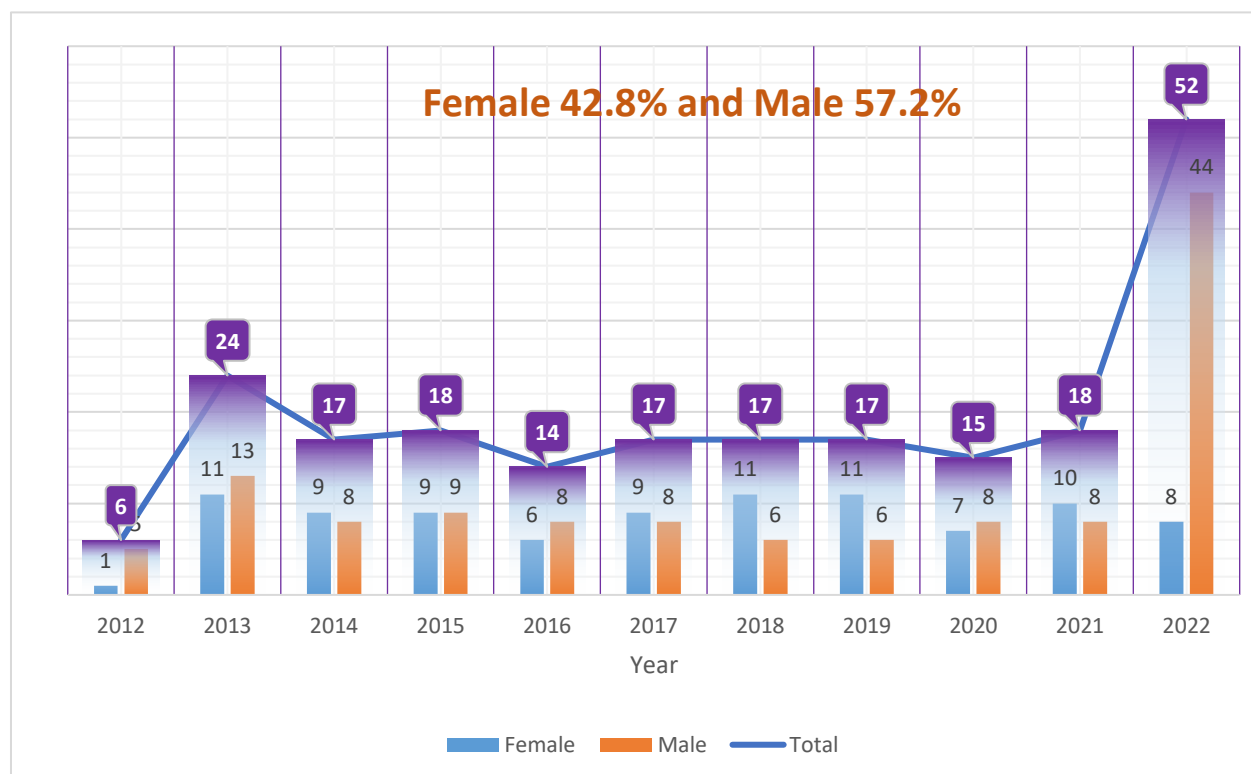
(e) Gender:

Figure 6: Contribution based on Gender (Male / Female)

Out of 215 published articles, 123 (i.e., 57.2%) articles are contributed by Male authors whereas 92 (i.e., 42.8%) articles are contributed by Female authors. (Figure 6).

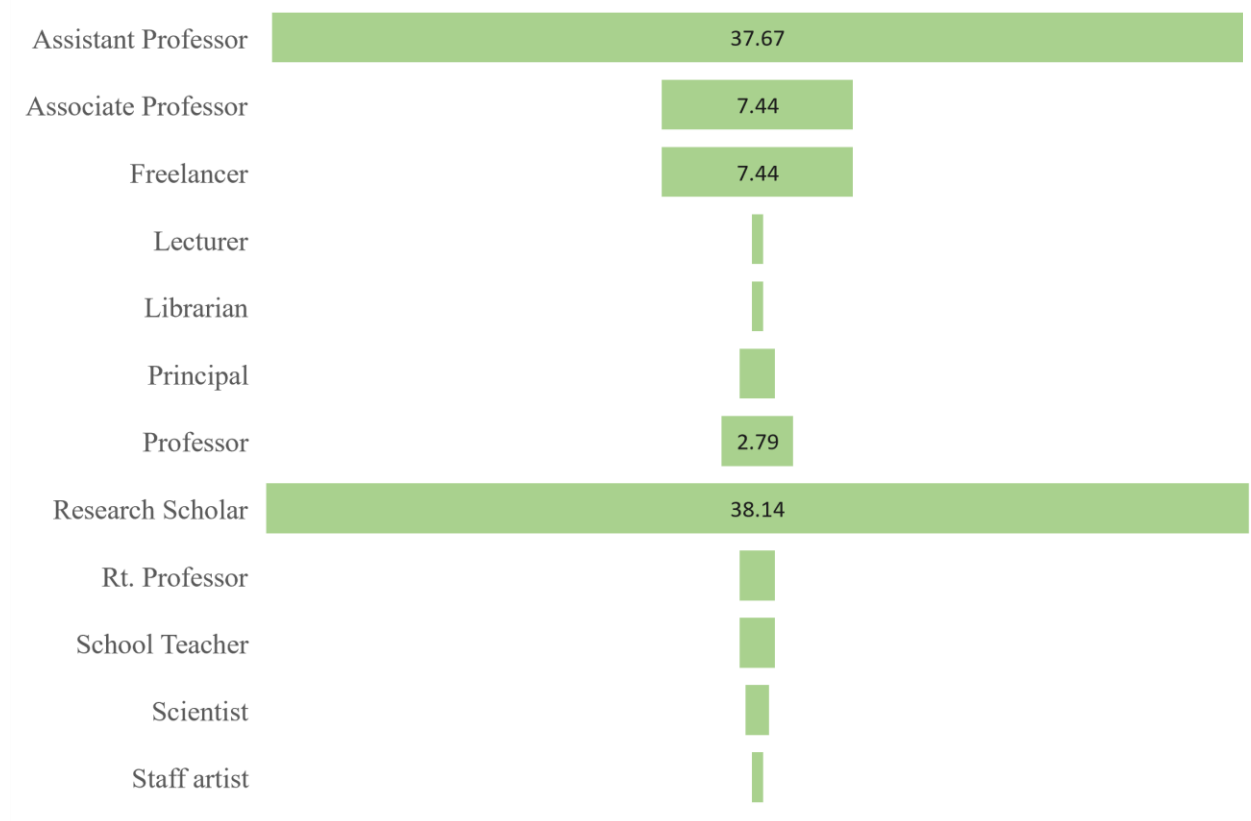
UGC-CARE enlisted & indexed in EBSCO International Database of Journals**(f) Designation:**

Figure 7: Trend based on the Designation of the authors

It was observed that out of 215 published articles, the majority of contributors are Research Scholars (i.e., 38.14 %) followed by Assistant Professors (i.e., 37.67%) (Figure 7). It has also been observed that academicians from other fields are also interested to contribute in music field.

(g) Institution:

Table 5: List of author's institution with a frequency percentage

Name of Institute	Percentage	Rank
BHU, Varanasi	10.23	1
Visva-Bharati, WB	10.23	2
Allahabad University, Allahabad	6.98	3
University of Delhi, New Delhi	4.65	4
Freelancer	3.72	5
Rajakiya Snatkottar Vidyalaya Berinag Pithoragarh, Uttarakhand	2.79	6
SNDT Women's University, Pune	2.79	7
Lalit Narayan Mithila University, Darbhanga	2.33	8

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Bharatkhande Hindustani Sangeet Mahavidyalaya, Lucknow	1.86	9
Sikkim University, Gangtok	1.86	10
Sree Sankaracharya University of Sanskrit, Kalady, Kerala	1.86	11
Mizoram university, Aizwal	1.40	12
Rajakiya Mahavidyalaya Tanakpur, Uttarakhand	1.40	13
Tripura University, Tripura	1.40	14
University of Calcutta	1.40	15
Academy of Modern learning, Sambhal UP	0.93	16
Baikunthi Devi Kanya Mahavidyalaya, Agra	0.93	17
Bhabha Atomic Research Centre, Mumbai	0.93	18
Central University Dimapur, Nagaland	0.93	19
Central University of South Bihar	0.93	20
DAV Nagpur	0.93	21
Dayalbagh Educational Institute, Agra	0.93	22
Dibrugarh University, Assam	0.93	23
Indira Kala Sangeet Visvavidyalaya, Khairagarh	0.93	24
Jay Narayan Vyas Visvavidyalaya, Jodhpur	0.93	25
Kurukshetra Visvavidyala, Kurukshetra	0.93	26
Lucknow, UP	0.93	27
Maharaja Sayajirao University Baroda	0.93	28
Rabindra Bharati University, Kolkata, West Bengal	0.93	29
Raja Mansingh Tomar Musings and Arts University, Gwalior	0.93	30
The Maharaja Sayajirao University of Baroda, Vadodra, Gujrat	0.93	31
University of Calicut, Kerala	0.93	32
University of Mumbai	0.93	33
All India Institute of Speech and Hearing, Mysuru	0.47	34
Allahabad Degree College Allahabad, UP	0.47	35
AMPG, BHU, Varanasi	0.47	36
Assam University, Silchar, Assam	0.47	37
Babasaheb Bheemrav Ambedkar University, Lucknow	0.47	38
Banasthali Vidyapith, Rajasthan	0.47	39
Bharatiya Uchcha Sikshan Sansthan, Shimla	0.47	40
Bilaspur, Chhatisgarh	0.47	41
Bir Bikram Memorial Collge, Agartala	0.47	42
Central University Allahabad	0.47	43
Central University of Jharkhand, Ranchi, Jharkhand	0.47	44
Central University of Tamilnadu	0.47	45
Chembai Memorial Government Music College, Palakkad Kerala	0.47	46
Dalhousie University Halifax, Canada	0.47	47
Dayanand Girls PG College, Kanpur, UP	0.47	48
Dev Sanskrit Visvavidyala, Shantikunj, Haridwar	0.47	49
DIET, Govt of Assam	0.47	50
Doordarshan Kendra Rajkot, Gujrat	0.47	51

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Dr. Harisingh Gour University, Sagar, MP	0.47	52
Goa India	0.47	53
Government Degree College Sumbal, J&K	0.47	54
Govt Maulana Azad Memorial PG College, Jammu	0.47	55
Guru Nanak Dev University, Amritsar, Punjab	0.47	56
Hatti Gold Mines Raichur, Karnataka	0.47	57
HCDSH, Hazaribag	0.47	58
Himachal Pradesh University, Summerhill, Shimla	0.47	59
IIT Guwahati	0.47	60
IIT Roorkee	0.47	61
Jivaji University, Gwalior	0.47	62
Kalai Kaviri College of Fine Arts, Tamilnadu	0.47	63
Kamala Arya Girls PG College, Mirzapur, UP	0.47	64
Kanpur, UP	0.47	65
KDS Mahavidyalay Jaunpur UP	0.47	66
Kerala, India	0.47	67
Kumayun University, Nainital	0.47	68
Language Pathology, Amity	0.47	69
LBSMPG College, Anand Nagar, Maharajganj, UP	0.47	70
LPU Jalandhar Punjab	0.47	71
Mahapurush Srimanta Sankaradeva Viswavidyala, Guwahati, Assam	0.47	72
Majuli College, Majuli, Assam	0.47	73
Mohanlal Sukhadiya University Udaipur Rajasthan	0.47	74
National Law University, Bhopal	0.47	75
Potti Sreeramulu Telugu University Hyderabad, Telangana	0.47	76
Punjabi University Patiala, Punjab	0.47	77
Punjabi University, Punjab	0.47	78
Research Scholar	0.47	79
RRMK Arya Mahila Mahavidyala, Pathankot, Punjab	0.47	80
Sachin Debbarman Memorial Government Music College, Agartala, Tripura	0.47	81
School of performing arts & visual arts IGNOU, New Delhi	0.47	82
SDM Government Music College, Agartala, Tripura	0.47	83
Shroff S R Rotary Institute of Chemical Technology Ankleshwar, Gujarat, India	0.47	84
Sikkim Central university, Sikkim	0.47	85
Song and Drama Division	0.47	86
SPPU, Pune	0.47	87
S-VYASA Deemed to be University Bangalore	0.47	88
Swami Vivekananda University	0.47	89
The west bengal national university of judicial sciences, Kolkata	0.47	90
Tribhuvan University, Nepal	0.47	91
University of Manchester, UK	0.47	92

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Vanasthali Vidyapith, Rajasthan	0.47	93
Vishwakarma University, Pune	0.47	94

The contributing institutes in India are enlisted with their respective percentage and rank (Table 5). Banaras Hindu University, Varanasi with 22 articles (10.23 %) holds Rank 1 and Visva-Bharati, West Bengal with 21 articles (9.77%) has Rank 2, Allahabad University Allahabad with 15 articles (6.98%) holds Rank 3, University of Delhi, New Delhi with 10 articles (4.65 %) holds Rank 4 followed by other institutes which are also contributing repeatedly.

(h) State:

Contribution from the different states in India are obtained and highlighted into the map of India (Figure 8). It was observed that out of 215 articles, majority of the articles i.e., 67 (31.16%) were contributed from the state Uttar Pradesh followed by West Bengal which contributes 29 articles (13.49 %). It should also be noted that outside countries like, Nepal, Canada, United Kingdom etc. are also showing their interest by contributing through their articles.

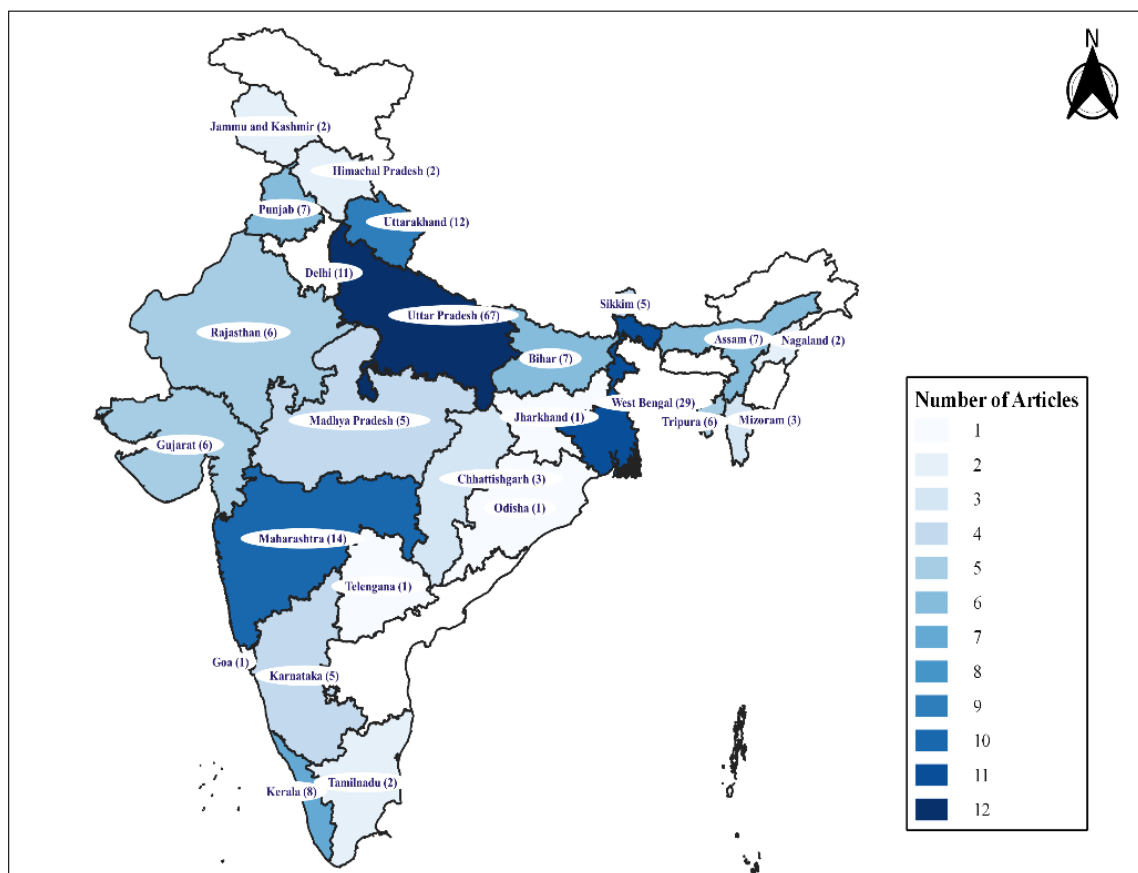


Figure 8: Contribution of articles from different states in India

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Conclusion:

The study is based on the articles contributed to the journal of Sangeet Galaxy by different authors from different institutes located in different states of India during the period of 2012- 2022. There was a total of 215 articles published by 263 authors. The maximum number of articles was published in the year 2012 with a total number of 52 (24.2 %) articles from 76 (28.9 %) authors. It was observed that the majority i.e., 180 (83.72 %) of the articles were published by a single author followed by two authors i.e., 28(13.02 %) and more than two authors contributed only 7 (3.26 %) articles. The study found that the maximum percentage of collaborative research (PCR) value was observed in the year 2022 and the minimum percentage of collaborative research (PCR) has observed in the year 2014. The articles published are not uniformly distributed over the years but the mean percentage of collaborative research is 50% or less for this journal. The analysis further shows that the percentage of rejection of articles is 50% or less. The Google Citation, the author Samidha Vedabala with 8 citations holds the first position, followed by Avesh Kumar with 3 citations, Parsuram Prasad Poudel and Joyanta Sarkar with 2 citations. Further, the study revealed that authors are contributing their articles in expended form in (5-10) pages. It was also noted that 123 (57.2 %) articles were contributed by Male authors whereas 92 (42.8 %) articles contributed by Female authors. Furthermore, majority of authors preferred to publish their articles in English and it has received the highest number of study period. Majority of contributors are research scholars (38.14 %) followed by assistant professors (37.67 %). It is also observed that according to ranking, BHU Varanasi has Rank 1, followed by Visva-Bharati, WB, Allahabad University, Allahabad, University of Delhi, New Delhi. Moreover, the majority i.e., 67 (31.16 %) articles were contributed from Uttar Pradesh followed by West Bengal i.e., 29 (13.49 %) articles.

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Reference:

1. Dubey, N. (2017). A Bibliometric Study of Sangeet Galaxy E-Journal. *Sangeet Galaxy*. 6(2): 47-52.
2. Sahu, R.R. and Parabhoi. L. (2020). Bibliometric Study of Library and Information Science Journal Articles during 2014-2018: LIS Research Trends in India. *Journal of Library & Information Technology*. 40(6): 390-395.
3. www.sangeetgalaxy.co.in
4. [Sangeet Galaxy - Google Scholar](https://scholar.google.com/citations?user=...)